

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(iii) NUMBER OF SEQUENCES: 23

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene

(B) LOCATION: 17p13.1

(D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

1

ggcctcccaa agtgctggat tacaggcgtg agtcaccgcg cctgggtcccc tgtcttcttt

61

aagaaagctc agcggacctt tttccttctt ggggtggaac aaaaagccaa atctagcaca

121

accctgggca ggggcccaga atcactggaa gcaaagggtg atgggatagg aggcgaggct

181

gcctgtggac cacaggcccc gcccgagtgg ctctgatgag aagccggggc gcctaggtca

241

ccgccccac cgtctgccct tccccccact cctcctggct gggtaaatacc cagagtctca

301

gccgcctaag tgtcttcccc ggaggtgaga ttatctccgc ctgtgctgga cacctccctt

361

tctcctgcag ccatggatgc cgctctgctc ctgaacgtgg aaggggtcaa gaaaaccatt

421

ctgcacgggg gcacggggcga gctcccaaac ttcatacccg gatcccgagt gagtggggcc

481

cctccggagc agacagggtc cccacagca gctttcaaca ttccaggtgt gcccgaaggc

541
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601
cggggagctc ccagcgttta cccattcagg gggcattttt ggtactttgc agattcaact
5 661
ttagcatggg ctgaggggaa gggcttttgg gaattttctg gggccctaaa tgttgagtga
721
gaagaaaggg agtccgagga gtcttggtat ttgtcccaa atgtctgtta ggcttcctg
781
10 gactgaaggg tgcgtctgtg gctacagaat tcgggctttg gccaggcgag gcggctcccg
841
cctgtaatcc cagcactttg ggaggccaag atgggcagat catgaggtca agagttcgag
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15 961
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1081
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25 1261
gatgggggtga actgagtgag ctgaccctgg ggacagccct ggggtgtcggg ggcaaggggg
1321
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30 gtgatctttc atttccgcac catgaaatgt gatgaggagc ggacagtcac tgacgacagt
1441
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1561
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1621
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1681
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1741
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1981
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2041
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2581
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3601
aacccccgtct ctattaaaaa cacaaaaaatt aaccgggtgt ggtggtgcat gcctgtaatc
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5 3721
cagtgagcag agatcatgtc agtgcatttt aacctgggtg acagagtgag actccatgtc
3781
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6061
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6541
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6601
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6661

ctggagctta gcctgagagg ggttcttgc

6689

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 1119 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **Baboon**

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene

(B) LOCATION:

(D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

atggatgccg ctctgctcct gaacgtggaa ggggtcaaga aaaccattct gcacggaggc
acgggcgagc tcccaaactt catcacgga tcccgagtga tctttcattt ccgcaccatg
aaatgtgatg aggagcgcac ggtcatcgac gacagccggc aggtggacca gcccatgcac
atcatcatcg ggaacatggt caagctcgag gtctgggaga tcctgctcac ctccatgagg
gtgcacgagg tggccgagtt ctgggtcgac accatccaca cgggggtcta cccatcctg
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gattaccaga gggagacctg gaacctgagc aatcatgaga agatgaaggt ggtgcccgtc
ctccacggag agggaaatcg gctcttcaag ctggggccgct acgaggaggc ctcttccaag
taccaggagg ccatcatctg cctaaggaac ctgcagacca aggagaagcc atgggagggtg
cagtggctga agctggagaa gatgatcaac accctgacct tcaactactg ccagtgcctg
ctgaagaagg aggagtatta cgagggtgctg gagcacacca gtgacattct ccggcaccac
ccaggcatcg tgaaggccta ctatgtgctg gcccgggctc acgcagaggt gtggaatgag
gccgaggcca aggcggaact ccagaaagtg ctggagctgg agccatccat gcagaaggcg
gtgcgcaggg agctgaggct gctggagaac cgcattggcag agaagcagga ggaggagcgg
ctgcgctgcc ggaacatgct gagccaggga gccacgcagc ctccacaga gccaccggca
gagccccaca cagcaccacc tgcggagctg tccacagggc cacctgcaga gccaccgcga

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ttggtgcgacaccatccacacaggggtctaccccatcctgtcccggagcctgcggcagatggcgg
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 gaggcctccaacaagtaccaggaagccatcgctctgcctgaggaacctgcagaccaaggagaaacc
 ctgggaggtgcagtggctgaagctggagaagatgatcaacaccctgatcctgaactactgtcagt
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 atgctgggctagtgcgcaggcgccaagcctcctgcctccgccccccgcycctccaccccccccaa
 aaaaaaaaaaaaaaattttt

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA *Dog*

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

tgtacgggggcaccggcgagctcccaaacttcctcacgggggtcccgggtcatctttcacttccgc
 acaacgaaatgcgacgaggcgcgacagtgatcgacgacagcaagcgtgtgggcatcccatgca
 catcatcatcgggaacatgttcaagctggaggtctgggaggtgctgctgacatccatgcgcgtgg
 gcgaggtggccgagttctggtgcgactctattcacacaggagtctaccccatcctgtcccggagc
 ctgcggcaggtggcggaggggcaaggacccactgagtggcatgtacacacgtgcggcttggccaa
 catgtttgcctatcacacgctgggctacgaggacctggacgagctacagaaggagccgcagcccc
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ctgaacaatgagagaagatgcagcgggtacccatctcatggagaggggaaccggctcttcaagctg
ggccgctacaatgatgcctccaccaagtaccaggagccatcgtctgctgaggaacctgcagacca
aggagaagcctgggaggtgcagtggcctaaagctggagaagctgatcaacaccttgattctcaact
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5 cggettccaccaggaatcgtgaaggcctactacgtgcgcgccccgggctcacgcggaggtgtggaa
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tgcgcagggagctgcggcttctggaaaatcgctggaggaaaagcgggaggaggagcggctgcgc
tgccggaacatgcta

10 (2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA **mouse**

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

atggacgtctctctactcctcaatgtggagggtgtcaagaagaccattctgcatggggggacagg
agagctccccaacttcatcactgggtccagagtgcctttcatttccgaacaatgaagtgtgatg
25 aagaacgcacggtgatcgatgacagcaagcaggtgggccagcccatgagcatcatcatcggaac
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cagcactga

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(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: cDNA *Squirrel monkey*

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene
- (B) LOCATION:
- (D) OTHER INFORMATION: produces aryl-hydrocarbon
receptor interacting protein-like 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

atggatgccgctctgctcctgaacgtggaaggggtcaagaagaccattctgcacgggggacggg
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aggagcggacggtgattgacgacagcagggaggtgggcccagcccatgcacatcatcatcggaac
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15

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cacagagccacccgcagagccacctgcagagccacctgcagagctaaccttgacccccggggcacc
cactacagcactga

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Met79Thr Mutation
- (B) LOCATION: 77...81
- (D) OTHER INFORMATION: Thr 79 mutation

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

acc tcc acg cgg gtg

15

Thr

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Trp88X mutation
- (B) LOCATION: 86...90
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

gag ttc tga tgc gac

15

X

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Val96Ile mutation
- (B) LOCATION: 94...98
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

acg ggg atc tac ccc
Ile

15

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Thr124Ile mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

gac ccc ata gag tgg
Ile

15

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 Pro376Ser mutation
 (B) LOCATION:
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
 cca ccc tcg tcc cca
 Ser

15

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Gln163X mutation
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

gat tac tag agg gag
 X

15

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Ala197Pro mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gag gag ccc tct tcc
Lys

15

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Trp278X mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

gag gtg tga aat gag
X

15

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS2-2A->G mutation

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

tcc cca cgg cac acg

15

IVS2-SA->G

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Glu262Ser mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

cac cca agt gcg cgg
Ser

15

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Arg302Leu mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

gcg gtg ctc agg gag
Leu

15

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Pro351del12 mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

g cca ccc aca gca
del TGCAGAGCCACC

13

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Cys239Arg mutation
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

tgc cag cgc ctg ctg
Arg

15

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:
gat att cac cca
del CTCCGGCAC

12

5

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Val33ins8 mutation
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

gac tag gtg atc ttg tga tct
ins GTGATCTT

10

15

20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS1-9G->A Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

CTC AGT GAC TAG

25

30

G->A

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2+66G->C Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

TTT GCC GGG CTG
G->C

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-88C->T Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

TCC TCT CAG GAG
C->T

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-14G->A Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

ATC CAT TTA TCC
G->A

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 IVS2-10A->C Benign
Variants/Polymorphisms
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

CGT TTC TCC CCA
A->C

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS3-25T->C Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CTG CCC CAC TGA

T->C

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 IVS3-21T->C Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

CCT CAC CGA CCT

T->C

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid

(ii) MOLECULE TYPE: DNA (genomic)
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 Phe37Phe Benign
 Variants/Polymorphisms
 (B) LOCATION:
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:
 CAT TTC CGC ACC
 Phe

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Ser78Ser Benign
Variants/Polymorphisms
(B) LOCATION:
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

ACC TCT ATG CGG
Ser

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Cys89Cys Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

TGG TGT GAC ACC

Cys

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Leu100Leu Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

ATC CTG TCC CGG

Leu

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 His172His Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

AAT CAC GAG AAG

His

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Pro217Pro Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

AAG CCG TGG GAG

Pro

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Asp255Asp Benign
Variants/Polymorphisms

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:
AGT GAC ATT CTC
Asp

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

5'-AAGAAAACCATTTCTGCACGG-3'

20

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

5'-TGCAGCTCGTCCAGGTCCT-3'

19

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

5

10

15

20

25

30

- (A) LENGTH: 17 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

5'-GACACCTCCCTTTCTCC-3'

17

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

5'-GCTGGGGCTGCCTGGCTG-3'

18

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:
5'-CCGAGTGATTACCAGAGGGA-3' 20

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 Primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:
5'-TGAGCTCCAGCACCTCATAG-3' 20

(2) INFORMATION FOR SEQ ID NO:48:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: Primer DNA (genomic) human
(ix) FEATURE:
(A) NAME/KEY: AIPL1 primer
(B) LOCATION:
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:
5'-ACGCAGAGGTGTGGAATG-3' 18

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: Primer DNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 Primer
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

5'-AAAAAGTGACACCACGATC-3'

19

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA (genomic) human

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene exon/intron donor splice site
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

CGGATCCCGAgtgagtggggccctccggagcaga

34

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: cDNA
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Acceptor
 splice site
 (B) LOCATION:
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:
 cagagtgcaccgtctcggtgactagGTGATCTTTC 35

(2) INFORMATION FOR SEQ ID NO:52:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 35 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: DNA (genomic) human
 (ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Donor splice
 site
 (B) LOCATION:
 (D) OTHER INFORMATION:
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:
 CSACACCATCgtaagtaggccctgcgcgcctgtct 35

(2) INFORMATION FOR SEQ ID NO:53:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 35 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
 (ii) MOLECULE TYPE: DNA (genomic) human
 (ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene exon/intron Acceptor

splice site
(B) LOCATION: 17p13.1
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:
gccatccatccgtttatccccacagCACACGGGGG

35

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 35 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice
site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

GCTGCTGCAGgtggggctgggggttggcagggctgg

35

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6689 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor
splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

cactgacctgcagctctgtggggccagGTTGATGCCC

35

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

GCAGACCAAGgtcagaggccgctggccacgggggtg

35

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

catggctgaccttctccctgggcagGAGAAGCCRT

35

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Donor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

CACCACCCAGgtgcgcggggctgcaggggcggaca 35

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic) human

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene exon/intron Acceptor splice site

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

gctggatgctccctgctccccacagGCATCGTGAA 35

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single

(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene Exon 1 Primer
 (B) LOCATION: 240
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:
 5'-ggacacctccctttctcc-3'

18

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 18 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene Exon 1 Primer
 (B) LOCATION: 240
 (D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:
 5'-gctggggctgcctggctg-3'

18

(2) INFORMATION FOR SEQ ID NO:62:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 20 bases
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
 (A) NAME/KEY: AIPL1 gene Exon 2 Primer
 (B) LOCATION: 297
 (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

5'-gggccttgaacagtgtgtct-3'

20

(2) INFORMATION FOR SEQ ID NO:63:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 2 Primer

(B) LOCATION: 297

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

5'-tttccccgaaacacagcagc-3'

19

(2) INFORMATION FOR SEQ ID NO:64:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 3 Primer

(B) LOCATION: 364

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

5'-agtgagggagcaggattc-3'

18

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 bases

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 3 Primer
(B) LOCATION: 364
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:
5'-tgcccatgatgcccgctgtc-3'

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 4 Primer
(B) LOCATION: 315
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:
5'-tttcgggtctctgatggg-3'

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 17 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA Primer
(ix) FEATURE:
(A) NAME/KEY: AIPL1 gene Exon 4 Primer

(B) LOCATION: 315
(D) OTHER INFORMATION:
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:
5'-gcaggctccccagagtc-3'

17

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer
(B) LOCATION: 279
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:
5'-gcagctgcctcagggtcatg-3'

19

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 bases
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

(A) NAME/KEY: AIPL1 gene Exon 5 Primer
(B) LOCATION: 279
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:
5'-gtgggggtggaaagaaaag-3'

18

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

5'-ctgggaaggagctgtag-3'

18

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 bases
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA Primer

(ix) FEATURE:

- (A) NAME/KEY: AIPL1 gene Exon 6 Primer
- (B) LOCATION: 497
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

5'-aaaagtgacaccacgatcc-3'

19

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Human** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

5 MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDE
ERTVIDDSRQVGQPMHIIIGNMFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSR
SLRQMAQGKDPTTEWHVHTCGLANMFAYHTLGYEDLDELQKEPQPLVFVIELLQVDAPS
DYQRETWNLSNHEKMKAVPVLHGEGNRLFKLGRYEEASSKYQEAIICLRNLQTKEKPW
EVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHHPGIVKAYYVRARAHAE
10 VVNEAEAKADLRKVLELEPSMQKAVRRELRLLENRMAEKQEEERLXCRNMLSQGATQP
PAEPPTPEPPAQSSTEPPAEPPTAPSAELSAGPPAEPATEPPPPSPGHSLOH

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Chimpanzee** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVGQPMHIIIGN
15 MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLVFVIELLQVDAPSDYQRETWNLSNHEKMKAVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVVNEAEAKADLRKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
25 MLSQGATQPPAEPPTPEPPAQSSTEPPAEPPPAPSAELSAGPPAETATEPPPPSPGHSLOH

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (ix) FEATURE:
- (A) NAME/KEY: **Baboon** Aipl1
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

MDAALLLNVEGVKKTILHGGTGLPNFITGSRVIFHFRTMKCDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKEKPWEVQWLKLEKMINTLTNLNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPTEPPAEPHTAPPAELSTGPPAEPPELPLSPGHSLQH

(2) INFORMATION FOR SEQ ID NO:75:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 444 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: protein
- (ix) FEATURE:
- (A) NAME/KEY: **Cow** Aipl1
- (B) LOCATION:
- (D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

MDATLLLNVEGIKKTILHGGTGDLPNFITGARVTFHFRTMKCDEERTVIDDSKQVGHPMHIIIGN
MFKLEVWEILLTSMRVSEVAEFWCDTIHTGVYPILSRSLRQMAEGKDPTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFIIELLQVEAPSQYQRETWNLNQEKMQAVPILHGEGNRLFKLGRYE
EASNKYQEAIIVCLRNLTKEKPWEVQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLEKLVLELEPSMRKAVQRELRLLENRLEEKREEERLRCRN
MLG

(2) INFORMATION FOR SEQ ID NO:76:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Mouse** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

MDVSLLLNVEGVKKTILHGGTGELPNFITGSRVTFHFRTMKCDEERTVIDDSKQVGQPMSEIIIGN
MFKLEVWETLLTSMRLGEVAEFWCDTIHTGVYPMLSRSLRQVAEGKDPTSWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLVFLYELLQVEAPNEYQRETWNLNNEERMQAVPLLHGEGNRLYKLGRYD
QAATKYQEAIVCLRNLTKEKPWEVEWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYMRARAHAEVWNAEEAKADLEKVLELEPSMRKAVLRELRLLESRLADKQEEERQRCRS
MLG

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: **Rhesus Monkey** Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSRQVDQPMHIIIGN
MFKLEVWEILLTSMRVHEVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTTEWHVHTCGLANMFAYH
TLGYEDLDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLGRYE
EASSKYQEAIICLRNLQTKKEPWEVQWLKLEKMINTLTLNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATQPPAEPPAQPTAPPAELSTGPPADPPAEPPTAPPAELSTGPPAEPPAELPLSPGHSLQH

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 444 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(A) NAME/KEY: *Squirrel Monkey* Aipl1

(B) LOCATION:

(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

MDAALLLNVEGVKKTILHGGTGELPNFITGSRVIFHFRTMKCDEERTVIDDSREVGQPMHIIIGN
MFKLEVWEILLTSMRVREVAEFWCDTIHTGVYPILSRSLRQMAQGKDPTEWHVHTCGLANMFAYH
TLGYEDLDDELQKEPQPLIFVIELLQVDAPSDYQRETWNLSNHEKMKVVPVLHGEGNRLFKLG RYE
EASSKYQEAIICLRNLQTKKEPWQWLKLEKMINTLILNYCQCLLKKEEYEVLEHTSDILRHH
PGIVKAYYVRARAHAEVWNEAEAKADLQKVLELEPSMQKAVRRELRLLENRMAEKQEEERLRCRN
MLSQGATWSPAEPPEPPAESSTEPPAEPPAEPPAELTLTPGHPLQH